

MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for July, 1900, is based on reports from about 3,101 stations furnished by employees and voluntary observers, classified as follows: regular stations of the Weather Bureau, 158; West Indian service stations, 12; special river stations, 132; special rainfall stations, 48; voluntary observers of the Weather Bureau, 2,562; Army post hospital reports, 22; United States Life-Saving Service, 9; Southern Pacific Railway Company, 96; Canadian Meteorological Service, 32; Mexican Telegraph Service, 20; Mexican voluntary stations, 7; Mexican Telegraph Company, 3. International simultaneous observations are received from a few stations and used, together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Hawaiian Government Survey, Honolulu; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Mr. Maxwell Hall, Government Meteorologist, Kingston, Jamaica; Capt. S. I. Kimball,

Superintendent of the United States Life-Saving Service; and Commander Chapman C. Todd, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is $157^{\circ} 30'$ or $10^{\text{h}} 30^{\text{m}}$ west of Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local standard is mentioned.

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

No severe storm of a general character appeared in the United States or the West Indies in July, 1900.

During the early part of the month local rains and thunderstorms occurred from the States of the Missouri Valley over the Lake region, New York, and northern New Jersey. On the 13th an extraordinary fall of rain occurred at Galveston, Tex., a depth of 14 inches being recorded in twenty-four hours, of which amount 3 inches fell in sixty minutes. Heavy rain fell in Texas on the 15th, and in the valley of Guadalupe River damage was caused by freshets. On the same day rains broke a prolonged period of drought and high temperature in the western and northwestern States, and during the next few days the conditions which caused these rains extended eastward to the Atlantic coast and ended a heated term of unusual intensity and duration in the Lake region, the Ohio Valley, and Middle Atlantic States. During the 24th needed rain fell over a large area in the central western States.

The rains of the month, although local in character, were, for the most part, accurately forecast, and information regarding the heated period was contained in the regular forecasts, and in special notices, or bulletins, furnished to the daily press.

CHICAGO FORECAST DISTRICT.

No storm warnings were issued for the upper Lakes during the month.

The weather was generally seasonable in the upper Lake region and in the northern and middle Rocky Mountain districts.—*Frank H. Bigelow, Professor.*

SAN FRANCISCO FORECAST DISTRICT.

The month, as a whole, was uneventful.

On the 20th thunderstorms, with high southeast wind, prevailed in Arizona. This rain, which was forecast for northern Arizona the morning of the 19th and for the entire State the evening of the 19th, broke a protracted drought in that section.—*Alexander G. McAdie, Forecast Official.*

PORTLAND, OREG., FORECAST DISTRICT.

There were no storms or unusual weather characteristics in this district during the month and no special warnings were issued.—*Edward A. Beals, Forecast Official.*

HAVANA, CUBA, FORECAST DISTRICT.

No important storms occurred, and no hurricane warnings were issued during the month.—*William B. Stockman, Forecast Official.*